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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/553,553
Filing Date: August 21, 2006
Appellant(s): BROUWER ET AL.

John P. Guenther
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/17/08 appealing from the Office action mailed 2/20/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5940230	Crandall	08-1999

US 4609265 McKee 09-1986

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-23 and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crandall (US 5940230) in view of McKee (US 4609265).

Regarding claim 11, Examiner makes the following findings of fact: Crandall discloses a wing mirror unit (Figs. 3, 4) for a vehicle, comprising: a base plate (20); a supporting frame (22) pivotally connected to the base plate (20) about a main pivot (Examiner Identified element B, see below) and an auxiliary pivot (Examiner identified element A);

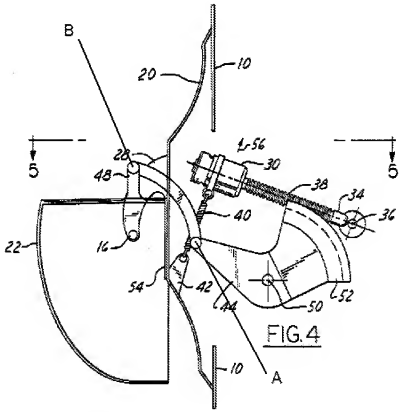


FIG. 4

Reproduced from Crandall, US 5940230.

and an actuator (30, 38, 52) including an engaging part (38, 52) connected to the supporting frame (22), the actuator connected to the main pivot (B) and configured to move the main pivot (B) in a path further outwardly from said vehicle than the auxiliary pivot (A); wherein the supporting frame (22) is pivotal with respect to the base plate between a folded orientation, in

which the supporting frame substantially abuts along a body (Fig. 4) of said vehicle, and an unfolded orientation (Figs. 3 and 4), in which the supporting frame is substantially oriented transversely to the body of said vehicle (Figs. 3 and 4); and further wherein the engaging part (38, 52) is adjustable between a first orientation located near the body of said vehicle and a second orientation located farther outward with respect the body of said vehicle (Figs. 3 and 4). Crandall does not teach that the main pivot moves in a linear path. Crandall and McKee are related as side-view mirrors. McKee teaches linear translation of a pivot joint (Fig. 6). The benefit of this arrangement is the accommodation a shorter motor shaft.

Therefore, Examiner concludes that it would have been obvious to an ordinarily skilled artisan at the time of invention to provide the invention of Crandall with linear translation of a joint as in McKee so as to accommodate a shorter motor shaft for any number of purposes including cost of parts or size accommodation design.

Further regarding claim 25, all elements previously addressed with respect to claim 11 and coincident with claim 25 are hereby incorporated. The combination further discloses that an actuator (Crandall, 30, 38, 52) including an engaging part (38, 52) that operatively engages the supporting frame (Figs. 3 and 4); wherein the means for pivoting the supporting frame (22) includes a main pivot for pivoting the supporting frame from a folded orientation to an unfolded orientation (Figs. 3 and 4 transition), and an auxiliary pivot (A) for pivoting the supporting frame (22) with respect to the base plate (20), and the main pivot (B) is configured to move in a linear path further outwardly from said vehicle than the auxiliary pivot (accomplished by the combination as described above).

Further regarding claim 32, all elements previously addressed with respect to claims 11 and 25 and coincident with claim 32 are hereby incorporated. The combination further discloses an actuator (Crandall, Fig. 4: 30, 38, 52) including an engaging part (38, 52); a supporting frame (22) pivotally connected to the actuator (30, 38, 52) about a main pivot (44, 46, 48) and pivotally connected to the base plate (20) about an auxiliary pivot (28, 16); wherein the engaging part (38, 52) supports the main pivot (44, 46, 48) and the position of the main pivot is adjustable inwardly and outwardly with respect to the body of said vehicle (Figs. 3 and 4) such that the main pivot point is configured to move from a position that is closer than the auxiliary pivot to said vehicle to a position that is further outwardly from said vehicle than the auxiliary pivot (as set forth above).

Regarding Claims 12-14, 16, 19-23, 26-29, 31, and 33, the aforementioned combination further discloses including a main pivot (44, 46, 48) for pivoting the supporting frame (22) from the unfolded orientation to an emergency folded orientation (Fig. 4); the main pivot is adjustable transversely to the body of said vehicle between the first orientation and the second orientation (Figs. 3 and 4) (i.e. the transition between Figs. 3 and 4); the engaging part (38, 52) supports the main pivot (44, 46, 48); the actuator adjusts the engaging part towards and away from the base plate (Figs. 3 and 4) (i.e. the transition between Figs. 3 and 4); an auxiliary pivot (28, 16) that is disconnectably anchored or attached to the base plate or the supporting frame (22); an auxiliary pivot (28, 16) with respect to the base plate (20) when the actuator (30, 38, 52) adjusts between the folded orientation and the unfolded orientation (Figs. 3 and 4); the engaging part is configured with some play with respect to the actuator (Fig. 6); the engaging part (30, 52), to overcome a dead center during an adjustment, can pivot by some degrees (Figs. 3, 4, 6); the

actuator includes a driving arm (44, 46, 48, 38, 52); and the supporting frame (22) is pivotal with respect to the base plate (10) between a folded orientation (Fig. 4), in which the supporting frame substantially abuts along the body of said vehicle (Fig. 4), and an unfolded orientation (Fig. 3), in which the supporting flame is substantially oriented transversely to the body of said vehicle (Fig. 3).

Regarding Claim 15, the combination does not explicitly disclose that the actuator is electric. However, electric actuators are well known in the art and since no mechanism is disclosed to run the motor (30) by hand, gas-power, solar power, or nuclear power, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an electric actuator, since the disclosed actuator must inherently be electric or an electric actuator would be an art recognized equivalent.

Regarding Claims 17-18 and 30, the combination discloses that the driving arm (44, 46, 48, 38, 52) forms the engaging part (38, 52). The combination does not disclose that the actuator is a linear actuator including a driving arm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a linear actuator in Crandall's mirror system, since it is an art recognized equivalent of the motor driving system disclosed.

(10) Response to Argument

A. Rejection of Claims 11-23 and 25-33

i. Claim Limitations

With respect to the final Office action of 2/20/08 at p. 4, Appellant argues that "[t]he Office asserts that Crandall teaches the claimed invention, although it expressly acknowledges

that Crandall does not teach that the main pivot moves in a linear path." (APPEAL BRIEF, Arguments, p. 5, hereinafter "Arg.").

With respect to claim 11, Appellant argues that "the engaging part of the actuator in Crandall is not adjustable between a first orientation located near the body of the vehicle and a second orientation located farther outward with respect to the body of the vehicle ... the distance from each structure 38, 52 to the vehicle 10 does not change such that the engaging part is located farther outward." (Arg. p. 5)

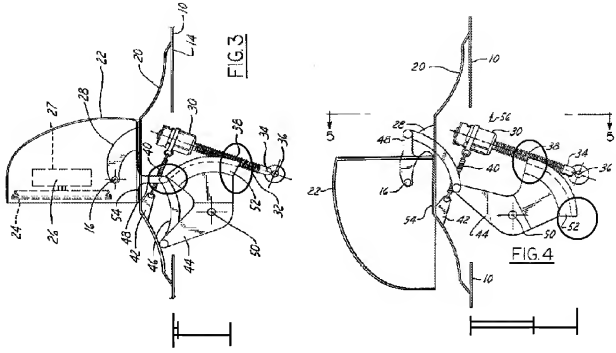
However, Examiner respectfully disagrees.

First, Examiner notes that the rejection in question (FINAL Office Action mailed 2/20/08) was issued in the common manner of: Crandall in view of McKee (with citations). Such notation makes apparent that the assertion made in the Office action was that *the combination* discloses the invention, and not a singular reference. Appellant is correct that the cited limitation is identified as not being taught by Crandall, alone. It is for this limitation that the McKee reference was provided as a secondary reference.

Second, as may be seen in Figs. 3 and 4, (reproduced below and relatively reoriented for ease of comparison), the tips of 52, circled below, an identified component of the engaging part (38, 52), is shown in two separate relationships with the vehicle body (10). In Fig. 3, on the left below, the left tip of 52 is very near or in line with the vehicle body (10), as indicated by the approximate measure of the positions of the circled portions added below the figure such that the left-most mark indicates the vehicle body, the top line (ending with the first hash) shows the approximate distance from the vehicle body. Similarly, the lines and hash marks below Fig. 4

show the approximate positions of the first and second tips of element 52 relative to the vehicle body. The increased distance shows the adjustment between a first orientation (as in Fig. 3) and a second orientation (as in Fig. 4) located farther outward with respect to the body of the vehicle.

No special definition of "outward" is found in the specification, and "outward" may be defined as "moving, directed, or turned toward the outside or away from a center," *Merriam-Webster's Collegiate Dictionary* 882 (11th ed. 2003). It is noted in MPEP § 2111.01 that "[d]uring examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re American Academy of Science Tech Center*, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation in light of the specification.). This means that the words of the claim must be given their plain meaning unless the plain meaning is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)." In this case, the interpretation of "outward" is not inconsistent with the specification, since the specification does not particularly define which direction "outward" is by any sufficiently specific special definition. Moreover, the language of the claim itself requires this movement to be "with respect to the body of said vehicle." Thus, the only obligatory reference point is the vehicle body. Since the transition between the first and second orientations are claimed with respect to the vehicle body (10), and since that distance is increased in a direction not parallel to the vehicle body, it is moving, directed, or turned away from a center (the vehicle body), thereby being in an "outward" manner.



(Reproduced from Crandall, US 5940230, Fig. 3 is rotated 90° counter-clockwise for ease of comparison; additional marks, identification circles, and approximate distance markings are additional annotations added by Examiner for illustrative and comparative purposes)

It is apparent that the distance from the vehicle 10 to the tips of 52, portions of the engaging part, does change. Pursuant to a broadest reasonable interpretation, as set forth above, such an interpretation, at least a part, 52, of the engaging part is adjusted farther outward; identified element 38, as part of the engaging part, need not further translate separately. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

ii. Nature of the Combination

With respect to claims 11, 25, and 32, Appellant asserts that the Examiner has failed to make a *prima facie* case because Crandall's reference is rotational, and "cannot move linearly based on the link and arm design of Crandall. It would require substantial reconstruction and redesign of Crandall to provide for linear movement of the main pivot ..." (Arg. p. 6, citing MPEP 2143.01 and *In re Ratti*, 123 USPQ 349 (CCPA 1959)). The combination is not obvious "because of differences in design and operation." (Arg. p. 7).

With respect to Examiner's offered motivation of linear translation allowing a shorter shaft, Appellant argues that it "is not supported" (Arg. p. 7) and "such linear translation is not necessarily required nor advantageous with a shorter motor shaft .. [r]ather a pivoting motion with a curved path may better accommodate a shorter motor shaft...[.]" Therefore, on this basis, there is no motivation. "There can be no suggestion or motivation to modify Crandall for a purpose of function that is already sufficiently met by Crandall." (Arg. p. 7).

However, Examiner respectfully disagrees.

First, Appellant's reliance on MPEP §2143.01 VI, citing *Ratti*, is not persuasive. The MPEP observes that "[t]he primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity, whereas the claimed invention requires resiliency." *Ratti* is predicated on the notion of entirely opposite and mutually exclusive device natures (i.e., rigidity versus resiliency). In the present case, there is no inherent or art-recognized oppositional nature of linear versus rotational motion. In fact, secondary

reference McKee transforms the rotational motion of cam 134 to the linear motion of 128 (Fig. 6). As previously noted, Crandall and McKee are both movable exterior rear view mirrors for vehicles. Thus, a reasonable expectation of success is established.

Additionally, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Further, Appellant has offered no other evidence of unexpected results, secondary considerations, or lack of reasonable expectation of success of the combination. *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); MPEP § 2105. Moreover, "'[o]bviousness does not require absolute predictability of success.'" See MPEP § 2143 citing *In re O 'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 at 1681 (Fed. Cir. 1988).

Second, the offered motivation of linear translation allowing a shorter shaft is supported by basic geometry. A curved support shaft must of mathematical necessity be physically longer than a linear support shaft to translate the same linear distance (i.e., a distance required for a particular function such as the view from the side-view mirror taking into account the trailer in McKee); thus, a shorter support shaft implies the ability to make a system smaller, which is key in an age of technological downsizing. Moreover, a linear motion retracts straight back, while a curved motion retracts both back and to one side. A casing for the latter would have to accommodate motion in both directions, rather than in one direction as in the former. Reducing the size would then at least reduce the cost of the basic materials because the quantity is reduced.

The language of Appellant's argument, which states "linear translation is not *necessarily* required" (p. 7, ln. 7) and "curved path *may* better accommodate" (p. 7. lns. 8-9), is written in conditional form and appears to contemplate the alternative; thus it appears to be directed to a concern regarding the same problem. The Supreme Court opined in *KSR International Co. v. Teleflex Inc. (KSR)*, 82 USPQ2d 1385 at 1391 (2007), that the Federal Circuit had erred: (1) "by holding that courts and patent examiners should look only to the problem the patentee was trying to solve " (Id. 82 USPQ2d at 1397); (2) by assuming "that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem" (*Id*). (As cited at MPEP § 2141 I). An explicit teaching for the combination need not be exclusively found in the secondary reference: "[u]nder the correct [obviousness] analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the [applicant] can provide a reason for combining the elements in the manner claimed." *KSR* at 1397. Further, "[r]igid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it." *Id.* A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton. *Id.*

Because precedent allows for analysis of alternative and creative problem solving outside the cited references, Appellant's problem as solved in the application or as offered in the alternative to Examiner's analysis is not exclusive or dispositive in an obviousness determination, and does not overcome the problem and benefit analysis provided by Examiner.

Additionally, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what

the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Further, "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR* at 1395. Appellant has offered no other evidence of unexpected results, secondary considerations, or lack of reasonable expectation of success of the combination. *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); MPEP § 2105. Moreover, "'[o]bviousness does not require absolute predictability of success.'" See MPEP § 2143 citing *In re O 'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 at 1681 (Fed. Cir. 1988).

Absent any persuasive evidence or argument, it is for the reasons set forth above that Examiner maintains the rejections of claims 11-23 and 25-33.

B. Rejection of Claims 17-18

Appellant argues that the identification of a linear actuator being equivalent to the motor driving system is improper since "to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the component at issue are functional or mechanical equivalents." MPEP 2144.06. The actuator of the Crandall reference does not meet the equivalency requirement. (Arg. p. 8).

However, Examiner respectfully disagrees.

First, and in response to Appellant's arguments against the Crandall individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Additionally, it is noted that a common definition of linear actuator does not necessarily imply rotational to linear motion conversion (as taught by the combination via McKee), and it was in this way the claim language was initially interpreted. However, it is noted that a broad and reasonable interpretation of the claim language "linear actuator" is actually met by the linear actuation accomplished by the combination (via McKee), since "actuate" may be defined as "to put into mechanical action or motion," *Merriam-Webster's Collegiate Dictionary* 13 (11th ed. 2003) and no special definition was found in the specification. Since the mirror of the combination, via McKee, is put into mechanical action or motion in a linear way, the limitation is met.

Nonetheless, the test for equivalency, as set forth at MPEP § 2183 is the prior art element:

> (A) performs the function specified in the claim,
> (B) is not excluded by any explicit definition provided in the specification for an equivalent, and (C) is an equivalent of the means- (or step-) plus-function limitation, [...]
> Factors that will support a conclusion that the prior art element is an equivalent are:
> (A) the prior art element performs the identical function specified in the claim in substantially the same way, and produces substantially the same results as the corresponding element disclosed in the specification. [...]
> (B) a person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification. [...]
> (C) there are insubstantial differences between the prior art element and the corresponding element disclosed in the specification. [...]
> (D) the prior art element is a structural equivalent of the corresponding element disclosed in the specification. [...] That is, the prior art element performs the function specified in the

> claim in substantially the same manner as the function is performed by the corresponding element described in the specification.

Specifically, (A) the movement of the mirror of the combination is linear, functioning, linearly, to extend and retract the side-view mirror; (B) no special definition of "linear actuator" is found in Appellant's specification at all, and thereby cannot exclude the described equivalent; (C) although not in a means-plus-function formulation, this limitation essentially calls for a means to linearly actuate a side-view mirror to extend and retract, which is the purpose of the cited reference.

Additional factors supporting this finding include: (A) as previously stated the movement of the mirror of the combination is linear, functioning, linearly, to extend and retract the side-view mirror; (B) because the change from rotational to direct actuation is a common mechanical interchange in motors and mechanical actuations of many kinds, a person of ordinary skill in the art would have recognized the interchangeability of the element shown in the prior art for the corresponding element disclosed in the specification; (C) as also noted above, the difference between the linear motion of the combination (via McKee) is insubstantially different from the linear actuator of the specification, whereof no special definition is found in the specification; and (D) it is apparent that the element of the prior art extends and retracts a side-view mirror in a linear motion, which is substantially the same in manner as the function performed by a strictly interpreted "linear actuator."

Therefore, it is for the foregoing reasons that the rejection of claims 17-18 is maintained.

C. Rejection of Claim 19

Appellant argues that the rejection is improper because the combination does not meet the limitation that "the auxiliary pivot is disconnectably anchored or attached to the base plate or the supporting frame" is not met because "[i]n contrast, Crandall at most teaches or discloses only that the auxiliary pivot (Examiner identified element A) remain disconnected to the base plate or supporting frame ...." (Arg. p. 9).

However, Examiner respectfully disagrees.

First, Examiner assumes that Appellant meant "the auxiliary pivot remains *connected* to the base plate ...." Since the pivot connects the elements, it is "attached." The claim language is written in the alternative: "disconnectably anchored or attached." Therefore, the prior art only need show that the pivot can be "disconnectably anchored" *or* that the pivot be "attached." In this case, it seems apparent that the pivot is attached to the support frame (22), since it is required to be attached to move element 22. Also, the "the base plate or supporting frame" is written in the alternative. Therefore, the prior art only need show that attachment is to either the "base plate" *or* the "supporting frame." Examiner identified the latter with element (22).

Finally, the limitations of the claims were identified and correlated with the references as indicated above and in the former Office action on the merits. Appellant has merely made the allegation that the limitations are not met, and thus has not provided any evidence or argument directed to how the identified elements in the first action fail to meet the claimed limitations or to how the identified elements are otherwise distinguishable from the claimed limitations.

Therefore, it is for the foregoing reasons that Appellant's arguments are not found persuasive, and Examiner, therefore, maintains the rejection as set forth hereinabove and in the previous Office action on the merits.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Conclusion

For the above reasons, it is believed that the rejections should be sustained, and such a finding is earnestly and respectfully sought.

Respectfully submitted,

/Jennifer L. Doak/
Examiner, Art Unit 2872

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